Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A composition comprising a polypeptide in crystalline form, wherein the polypeptide is a TNF-α-converting enzyme (TACE) polypeptide, and wherein the crystal is of monoclinic space group $P2_1$.

2. (Currently amended) A composition according to claim 1, wherein the TACE polypeptide comprises ~~the~~ a TACE catalytic domain (TCD).

3. (Currently amended) A composition according to claim 1, wherein the TACE polypeptide is the expression product of a polynucleotide encoding ~~the~~ a pro domain and a catalytic ~~domains~~ domain of TACE.

4. (Currently amended) A composition according to claim 1, wherein the TACE polypeptide is the expression product of a polynucleotide encoding ~~the~~ amino acid residues 1-477 of TACE as set forth in SEQ ID NO:8.

5. (Currently amended) A composition according to claim 4, wherein the polynucleotide is substituted such that amino acid residue Ser266 as set forth in SEQ ID NO:8 is changed to Ala and amino acid residue Asn542 as set forth in SEQ ID NO:8 is changed to Gln, and wherein a second polynucleotide encoding the sequence Gly-Ser-$(His)_6$ (SEQ ID NO:2) is fused to the C-terminus.

6. (Currently amended) A composition according to claim 1, further comprising a binding partner ~~suitable for co-crystallization with the TACE polypeptide~~.

7. (Original) A composition according to claim 6, wherein the binding partner is a

hydroxamate-based binding partner.

8. (Currently amended) A composition according to claim 6, wherein the binding partner is ~~N-{D,L-2-(hydroxyaminocarbonyl)methyl-4-methylpentanoyl)-L-3-amino-2-dimethylbutanoyl-L-alanine,2-(amino)ethyl amide~~ N-{D,L-2-(hydroxyaminocarbonyl)methyl-4-methylpentanoyl}-L-3-amino-2-dimethylbutanoyl-L-alanine,2-(amino)ethyl amide.

9. (Currently amended) A composition according to claim 1, wherein the crystal ~~has a crystal structure diffracting~~ diffracts to 2.0 Å.

10. (Canceled)

11. (Currently amended) A composition according to claim 1, wherein the unit cell of the crystal comprises four crystallographically independent TACE catalytic domain (TCD) ~~TCD~~ molecules.

12. (Original) A composition according to claim 11, wherein the TCD molecules are in an asymmetric unit.

13. (Currently amended) A composition according to claim 1, wherein the crystal ~~is of monoclinic space group P21 and the cell has the constants~~ has unit cell dimensions a=61.38 Å, b=126.27 Å, c=81.27 Å, and β=107.41°.

14. (Currently amended) A composition according to claim 1, wherein the ~~polypeptide is characterized by~~ the crystal has the structure coordinates according to Table 1~~, or a substantial part thereof~~.

15. (Currently amended) A method for crystallizing a TACE polypeptide, comprising:

(A) mixing a solution comprising a TACE polypeptide and a binding partner with a crystallization buffer, wherein the crystallization buffer comprises sodium citrate; and

(B) crystallizing the mixture of step (A) by drop vapor diffusion to form a crystalline precipitate.

16. (Original) The method according to claim 15, further comprising:

(C) transferring seeds from the crystalline precipitate formed by the drop vapor diffusion, along with a crystallization promoter, into a mixture of a concentrated solution comprising a TACE polypeptide and binding partner substrate, and a crystallization buffer; and

(D) crystallizing the mixture of step (C) by drop vapor diffusion to form a crystal.

17. (Original) The method of claim 15, wherein said crystallization buffer is 0.1M Na Citrate pH 5.4, 20%w/v PEG 4000, and 20% v/v isopropanol.

18. (Original) The method of claim 15, wherein the binding partner is N- {D,L-2-(hydroxyam inocarbonyl)methyl-4-methylpentanoyl }-L-3 -amino-2-dimethylbutanoyl-L-alanine, 2-(amino)ethyl amide.

19. (Original) The method of claim 15, wherein crystallization is at a temperature ranging from 4 to 20 degrees Celsius.

20. (Original) The method of claim 15, wherein the solution comprising the TACE polypeptide and the binding partner is at a concentration of about 5 mg/mL to about 12 mg/mL in a buffer.

21. (Original) The method of claim 20, wherein the solution is mixed with the crystallization buffer in a 1:1 ratio.

22. (Currently amended) A TACE crystal made by co-crystallizing a TACE polypeptide with a co-crystallization substrate, wherein the TACE crystal is of monoclinic space group $P2_1$.

23-27. (Canceled)

28. (New) The TACE crystal of claim 22, wherein the crystal has unit cell dimensions a=61.38 Å, b=126.27 Å, c=81.27 Å, and β=107.41°.

29. (New) The TACE crystal of claim 22, wherein the TACE polypeptide is the expression product of a polynucleotide encoding amino acid residues 1-477 of TACE as set forth in SEQ ID NO:8.

30. (New) The TACE crystal of claim 22, wherein the crystal has the structure coordinates according to Table 1.

31. (New) The TACE crystal of claim 22, wherein the substrate is N-{D,L-2-(hydroxyam inocarbonyl)methyl-4-methylpentanoyl}-L-3 -amino-2-dimethylbutanoyl-L-alanine, 2-(amino)ethyl amide.